

For Research Use Only

# RBP4 Recombinant antibody, PBS Only (Capture)

Catalog Number: 84496-1-PBS



## Basic Information

<b>Catalog Number:</b> 84496-1-PBS	<b>GenBank Accession Number:</b> BC020633	<b>Purification Method:</b> Protein A purification
<b>Size:</b> 100ug, Concentration: 1 mg/ml by Nanodrop;	<b>GeneID (NCBI):</b> 5950	<b>CloneNo.:</b> 241944B3
<b>Source:</b> Rabbit	<b>UNIPROT ID:</b> P02753	
<b>Isotype:</b> IgG	<b>Full Name:</b> retinol binding protein 4, plasma	
	<b>Calculated MW:</b> 201 aa, 23 kDa	
	<b>Observed MW:</b> 20-21 kDa	

## Applications

**Tested Applications:**  
WB, FC (Intra), Cytometric bead array, Sandwich ELISA, Indirect ELISA, Sample test

**Species Specificity:**  
human

## Product Information

84496-1-PBS targets RBP4 as part of a matched antibody pair:

MP01338-1: 84496-1-PBS capture and 84496-2-PBS detection (validated in Cytometric bead array, Sandwich ELISA)

MP01338-2: 84496-1-PBS capture and 84496-4-PBS detection (validated in Cytometric bead array)

MP01338-3: 84496-1-PBS capture and 84496-3-PBS detection (validated in Cytometric bead array)

Unconjugated rabbit recombinant monoclonal antibody in PBS only (BSA and azide free) storage buffer at a concentration of 1 mg/mL, ready for conjugation. Created using Proteintech's proprietary in-house recombinant technology. Recombinant production enables unrivalled batch-to-batch consistency, easy scale-up, and future security of supply.

This conjugation ready format makes antibodies ideal for use in many applications including: ELISAs, multiplex assays requiring matched pairs, mass cytometry, and multiplex imaging applications. Antibody use should be optimized by the end user for each application and assay.

## Background Information

RBP4 (retinol-binding protein 4) is a carrier protein that transports vitamin A (retinol) from the liver to the peripheral tissues. Synthesized primarily by hepatocytes and adipocytes as a 21 kDa non-glycosylated protein, RBP4 is secreted into the circulation as a retinol-RBP4 complex. In plasma the RBP4-retinol complex is bound to transthyretin (TRR), which prevents prevent kidney filtration. Two truncated forms of RBP4, RBP4-L (truncated at Leu-183) and RBP4-LL (truncated at Leu-182 and Leu-183), exist by proteolytic process. RBP4-L and RBP4-LL, which do not bind TTR, are normally excreted into the urine but accumulate in the serum during renal failure. Urinary RBP4 has been reported as marker for glomerular disease. RBP4 also was identified as an adipokine that elevated in some INS-resistant states. Measurement of serum RBP4 could be used to assess the risk of INS resistance, type 2 diabetes, obesity, and cardiovascular disease. (18752671, 16034410)

## Storage

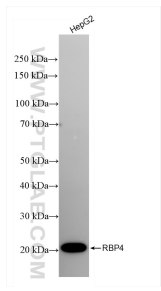
**Storage:**  
Store at -80°C.

**Storage Buffer:**  
PBS Only

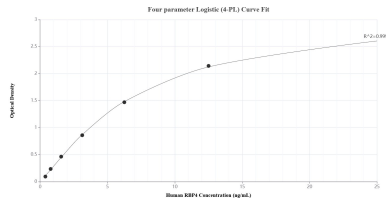
For technical support and original validation data for this product please contact:  
T: 1 (888) 4PTGLAB (1-888-478-4522) (toll free in USA), or 1(312) 455-8498 (outside USA) E: proteintech@ptglab.com W: ptglab.com

This product is exclusively available under Proteintech Group brand and is not available to purchase from any other manufacturer.

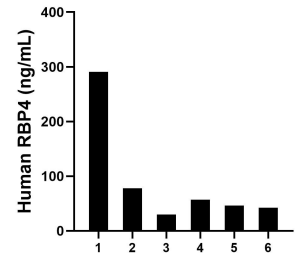
# Selected Validation Data



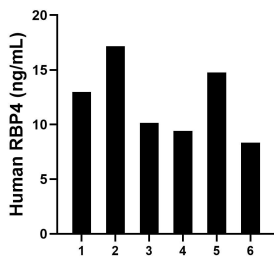
HepG2 cells were subjected to SDS PAGE followed by western blot with 84496-1-RR (RBP4 antibody) at dilution of 1:10000 incubated at room temperature for 1.5 hours. This data was developed using the same antibody clone with 84496-1-PBS in a different storage buffer formulation.



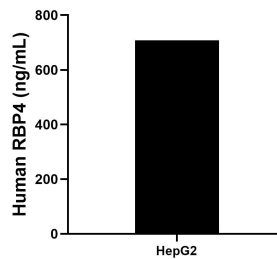
Sandwich ELISA standard curve of MP01338-1, Human RBP4 Recombinant Matched Antibody Pair - PBS only. 84496-1-PBS was coated to a plate as the capture antibody and incubated with serial dilutions of standard Eg31642. 84496-2-PBS was HRP conjugated as the detection antibody. Range: 0.391-25 ng/mL



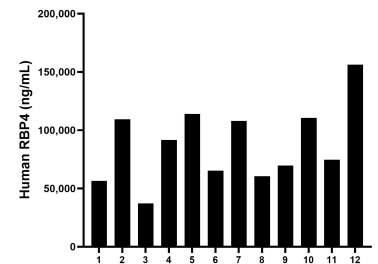
Urine of six individual healthy human donors was measured. The RBP4 concentration of detected samples was determined to be 90.68 ng/mL with a range of 29.96 - 290.83 ng/mL.



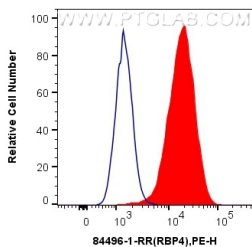
Saliva of six individual healthy human donors was measured. The RBP4 concentration of detected samples was determined to be 12.14 ng/mL with a range of 8.34-17.17 ng/mL



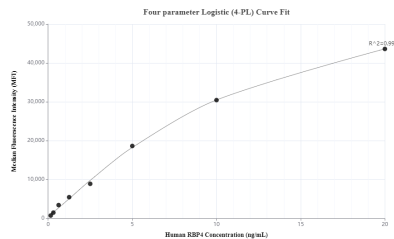
HepG2 cells were cultured in DMEM supplemented with 10% fetal bovine serum, 2.5 mM L-glutamine, 100 U/mL penicillin, and 100 µg/mL streptomycin sulfate. An aliquot of the cell culture supernate was removed, assayed for human RBP4, and measured 707.54 ng/mL



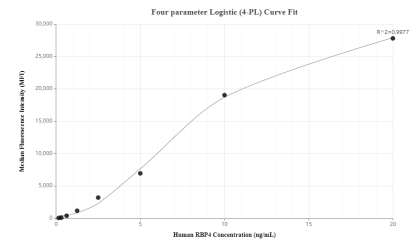
Serum of twelve individual healthy human donors was measured. The RBP4 concentration of detected samples was determined to be 87,804.85 ng/mL with a range of 37,160.99 - 156,178.64 ng/mL



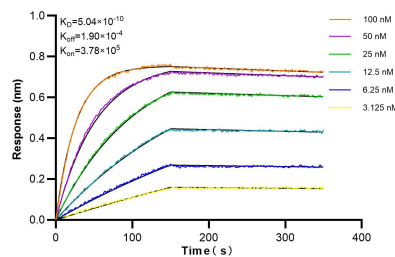
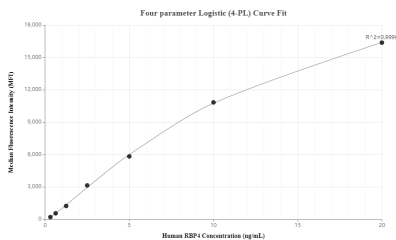
1x10<sup>6</sup> HepG2 cells were intracellularly stained with 0.25 µg RBP4 Recombinant antibody (84496-1-RR, Clone:241944B3) and PE-Conjugated Goat Anti-Rabbit IgG(H+L) (red), or 0.25 µg Rabbit IgG Isotype Control Recombinant Antibody (98136-1-RR, Clone: 240953C9) (blue). Cells were fixed with 4% PFA and permeabilized with Flow Cytometry Perm Buffer (PF00011-C). This data was developed using the same antibody clone with 84496-1-PBS in a different storage



Cytometric bead array standard curve of MP01338-1, RBP4 Recombinant Matched Antibody Pair, PBS Only. Capture antibody: 84496-1-PBS. Detection antibody: 84496-2-PBS. Standard: Eg31642. Range: 0.156-20 ng/mL



Cytometric bead array standard curve of MP01338-2, RBP4 Recombinant Matched Antibody Pair, PBS Only. Capture antibody: 84496-1-PBS. Detection antibody: 84496-4-PBS. Standard: Eg31642. Range: 0.156-20 ng/mL



Cytometric bead array standard curve of MP01338-3, RBP4 Recombinant Matched Antibody Pair, PBS Only. Capture antibody: 84496-1-PBS. Detection antibody: 84496-3-PBS. Standard: Eg31642. Range: 0.313-20 ng/mL

Biolayer interferometry (BLI) kinetic assays of 84496-1-RR against Human RBP4 were performed. The affinity constant is 0.504 nM.